

Application No. 10/518151
Reply to Action dated 02/20/2008
Page 2

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IN THE CLAIMS

Amendments To The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A high toughness die-cast product, comprising an Al-Mg casting alloy having $3.5 \text{ wt } \% \leq \text{Mg} \leq 4.5 \text{ wt } \%$, $0.8 \text{ wt } \% \leq \text{Mn} \leq 1.5 \text{ wt } \%$, $\text{Si} < 0.5 \text{ wt } \%$, $\text{Fe} < 0.5 \text{ wt } \%$, a sum $(\text{Ti} + \text{Zr})$ of the amounts of Ti and Zr added of ~~equal to or~~ greater than $[[0.3]]$ 0.5 wt %, and a ratio (Ti/Zr) of the amounts of Ti and Zr added of at least 0.3 but not more than 2, with the balance being Al.
2. (Original) The high toughness die-cast product according to claim 1, wherein a pouring temperature T is $720^\circ\text{C} \leq T \leq 730^\circ\text{C}$.
3. (Previously Presented) The high toughness die-cast product according to claim 1, wherein it is thin such that it has a minimum thickness t_1 of $1.2 \text{ mm} \leq t_1 \leq 3 \text{ mm}$, and it is large such that a maximum flow distance d of a melt within a die cavity is 200 mm or greater.
4. (Cancelled)
5. (New) The high toughness die-cast product according to claim 1, comprising:
a first chill layer;
a second chill layer disposed on opposite side of the first chill layer;
a minimum thickness t_1 of $1.2 \text{ mm} \leq t_1 \leq 3 \text{ mm}$;
wherein a proportion P of the sum of thickness of the first chill layer t_3 and thickness of the second chill layer t_4 relative to the minimum thickness t_1 is at 18% or greater.

Application No. 10/518151
Reply to Action dated 02/20/2008
Page 3

6. (New) A die-cast product, comprising an Al-Mg casting alloy having $3.5 \text{ wt } \% \leq \text{Mg} \leq 4.5 \text{ wt } \%$, $0.8 \text{ wt } \% \leq \text{Mn} \leq 1.5 \text{ wt } \%$, $\text{Si} < 0.5 \text{ wt } \%$, $\text{Fe} < 0.5 \text{ wt } \%$, $\text{Ti} > 0.2 \text{ wt } \%$, a sum $(\text{Ti} + \text{Zr})$ of the amounts of Ti and Zr added of equal to or greater than $0.3 \text{ wt } \%$, and a ratio (Ti/Zr) of the amounts of Ti and Zr added of at least 0.3 but not more than 2, with the balance being Al.
7. (New) The die-cast product according to claim 6, comprising:
a first chill layer;
a second chill layer disposed on opposite side of the first chill layer;
a minimum thickness t_1 of $1.2 \text{ mm} \leq t_1 \leq 3 \text{ mm}$;
wherein a proportion P of the sum of thickness of the first chill layer t_3 and thickness of the second chill layer t_4 relative to the minimum thickness t_1 is at 18% or greater.
8. (New) A die-cast product, comprising an Al-Mg casting alloy having $3.5 \text{ wt } \% \leq \text{Mg} \leq 4.5 \text{ wt } \%$, $0.8 \text{ wt } \% \leq \text{Mn} \leq 1.5 \text{ wt } \%$, $\text{Si} < 0.5 \text{ wt } \%$, $\text{Fe} < 0.5 \text{ wt } \%$, $\text{Zr} > 0.3 \text{ wt } \%$, a sum $(\text{Ti} + \text{Zr})$ of the amounts of Ti and Zr added of greater than $0.3 \text{ wt } \%$, and a ratio (Ti/Zr) of the amounts of Ti and Zr added of at least 0.3 but not more than 2, with the balance being Al.
9. (New) The die-cast product according to claim 8, comprising:
a first chill layer;
a second chill layer disposed on opposite side of the first chill layer;
a minimum thickness t_1 of $1.2 \text{ mm} \leq t_1 \leq 3 \text{ mm}$;
wherein a proportion P of the sum of thickness of the first chill layer t_3 and thickness of the second chill layer t_4 relative to the minimum thickness t_1 is at 18% or greater.